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# United States Patent [19]

Miller

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[54] **PROGRAMMABLE SELF-OPERATING  
COMPACT DISK DUPLICATION SYSTEM**

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## Related U.S. Application Data

[63] Continuation-in-part of application No. 08/816,257, Mar. 13, 1997, abandoned.

[51] **Int. Cl.<sup>7</sup>** ..... **G11B 17/22**

[52] **U.S. Cl.** ..... **369/30; 34/178**

[58] **Field of Search** ..... 369/29, 30, 32,  
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201, 202

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## [57] ABSTRACT

A system for the duplication of binary data onto CD-R disks, the system including a copy unit, a host computer and computer software, the software being installed in the host computer to provide a user interface and to direct the transfer of data from the host computer to the copy unit, the copy unit including a set of multiple stacked recordable disk drives, a microprocessor electronically connected to the activating mechanism of a pivotal transport tower and to the set of multiple stacked recordable disk drives. A robotic disk pickup head on the pivotal transport tower is encompassed by a set of disk spindle members arranged in a symmetric semi-circular pattern around the central tower, the disk pickup head being connected to the pivotal transport tower with an elevator mechanism for lifting and transporting compact disks among the disk spindle members and any selected one of the stacked recordable disk drive members. The microprocessor concurrently directs the movement of the disk pickup head and the copying of data to the CD-R disks in the disk drive members. After a disk copy operation is completed, the computer software and microprocessor may direct the stacked recordable disk drive members to inspect the burned CD-R disks for copy errors and further direct the disk pickup head to remove and eject defective burned CD-R disks and place properly burned CD-R disks on a specified disk spindle member. The system allows for source data to be read from multiple master compact disks inserted in specified stacked recordable disk drive members to provide for random access copying from the multiple master compact disks.

**39 Claims, 8 Drawing Sheets**

